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10/723,325

11/26/2003

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AIRIP0109USA

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EXAMINER

WEATHERBY, ELLSWORTH

ART UNIT

PAPER NUMBER

3768

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/723,325	Applicant(s) SRINIVASAN, RAVI	
	Examiner ELLSWORTH WEATHERBY	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/26/2003; 09/07/2010</u> . | 6) <input checked="" type="checkbox"/> Other: <u>foreign</u> . |

DETAILED ACTION

Claim Objections

1. Claim 32 is objected to because of the following informalities: “through the active line and the passive” should read “through the active line or the passive”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 15-19, 21-22, 24-26, 29 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Ziarati (USPN 5,877,732).
4. Ziarati teaches a method for improving the compatibility of a magnetic resonance accessory (e.g. audio/video system) for maintaining or monitoring the health of a patient while undergoing magnetic resonance imaging with an MR system (Abstract; Figs. 1-10; col. 1, ll. 31-50), comprising; reducing an interference between the accessory and any static magnetic field of any MR system by forming the accessory from non-interference generating components, e.g. plastic, copper or silver, as well as shielding electrical components or remotely locating electro-magnetic components at least 5 feet from the MR system (col. 4, l. 60- col. 5, l. 7; col. 7, ll. 1-24; col. 13, ll. 49-61) and isolating

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electrical components from the MR system (col. 4, l. 60- col. 5, l. 7; col. 6, ll. 5-30); reducing an interference between the accessory and any time-varying gradient magnetic field of any MR system by minimizing a number of metallic-moving parts of the accessory or placing metal sections away from a gradient cross-over along a magnet axis (col. 3, l. 53- col. 4, l. 34; col. 4, l. 60- col. 5, l. 7; col. 6, ll. 5-30;); reducing radio frequency interference between the accessory and the MR system by using an RF tight enclosure (col. 6, ll. 16-39; col. 6, l. 60- col. 7, l. 25); and reducing electromagnetic interference between the accessory and the MR system by shielding at least one electronic component in an RF tight box (col. 6, ll. 16-39; col. 6, l. 60- col. 7, l. 6), using shielded cable for at least one signal line (col. 6, ll. 40-59), and grounding at least one signal line (col. 6, ll. 40-59).

5. Claims 15 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nordell et al. (WO 98/48756).

6. Nordell et al. (hereinafter Nordell) teaches a method for improving compatibility comprising: reducing an interference between the accessory (incubator) and a static MR field by forming an accessory from non-conductive or plastic components (pg. 8, ll. 15-25); and isolating electrical components from the MR system (pg. 2, l. 24- pg. 3, l. 7); reducing interference between the accessory and a time varying gradient magnetic field by minimizing metallic parts (pg. 8, ll. 15-25) and placing metal sections away from gradient cross-over along a magnetic axis (pg. 3, ll. 20-29); reducing RF interference between the accessory and the MR system by using filtered lines (pg. 3, ll. 5-7); And

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reducing electro-magnetic interference between the accessory and the MR system (pg. 2, l. 24- pg. 3, l. 7; pg. 8, ll. 15-25; pg. 3, ll. 5-7). Nordell also shows an example of providing a step of inhibiting improper insertion of the accessory into the MR system (See Figs. 2-3). Here, the Examiner stands that the insertion of the incubator, as shown in figs 2-3, inherently includes a mechanical stop means for inhibiting improper insertion into the MRI system because the table (ref. 63) prevents the incubator (3) from being pushed all the way through the MRI bore.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ziarati (USPN 5,877,732) in view of Taylor (RE 34,236).

9. The method for improving compatibility of a device of Ziarati teaches all the limitations of the claimed invention except for expressly teaching that the step of forming the accessory from non-interference components includes forming the accessory from components that are transparent to a magnetic field generated by the MR system.

10. In a related field of endeavor, Taylor teaches an MR compatible audio system configured for use in an MRI system (Abstract; Figs. 1-10). Taylor goes on teaching the use of MR transparent plastic (claim 1).

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11. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method for improving compatibility of a device of Ziarati in view of the MR transparent plastic of Taylor. The motivation to modify Ziarati in view of Taylor would have to improve imaging using known materials.

12. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ziarati (USPN 5,877,732) in view of Byrstritzky et al. (Pub. No.; 2007/0299370).

13. The method for improving compatibility of a device of Ziarati teaches all the limitations of the claimed invention except for expressly teaching forming the accessory from non-magnetic and low permeability components.

14. In a related field of endeavor, Byrstritzky teaches a method and device for use in a MRI device (Abstract). Byrstritzky goes on, teaching the accessory should be formed from a metal that is non-magnetic and has low permeability (0021).

15. It would have been obvious to one of ordinary skill in the art to modify a material of Ziarati in view of the non magnetic, low material metal of Byrstritzky. The motivation to modify Ziarati in view of Byrstritzky would have been to reduce field distortion or image distortion, as taught by Byrstritzky (0021).

16. Claims 27-28 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziarati (USPN 5,877,732) in view of Ziarati (USPN 5,432,544).

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17. The method for improving compatibility of a device of Ziarati teaches all the limitations of the claimed invention except for expressly teaching using a filter in at least one active or passive signal line.

18. In a related field of endeavor, Ziarati teaches a magnet room display of images (Abstract; Figs. 1-4). Ziarati goes on, teaching the use of a filter in at least one signal line and including at least one of: shunting interference signals to ground and blocking interference signals from passing through the at least one signal line (col. 2, ll. 18-65; col. 5, ll. 10-31; col. 3, l. 62- col. 4, l. 4).

19. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method for improving compatibility of a device of Ziarati in view of the low interference filtered lines of Ziarati. The motivation to modify Ziarati in view of Ziarati would have been to further reduce interference signals from interfering the operation of the MRI device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLSWORTH WEATHERBY whose telephone number is (571) 272-2248. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/EW/

/Long V Le/
Supervisory Patent Examiner, Art Unit 3768